

COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

700 NE Multnomah Street, Suite 1200

Portland, OR 97232

Telephone 503-238-0667

DUNS NUMBER: 086625019

System Award Management REGISTRATION RENEWAL DATE: 08/08/2013

January 2016

I. INTRODUCTION

The Columbia River Inter-Tribal Fish Commission (CRITFC) was formed in 1977 by the Nez Perce Tribe, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, and the Confederated Tribes and Bands of the Yakama Nation. The ancestral homeland of the CRITFC tribes covers one-fourth of the Columbia River Basin. Under treaties with the United States signed in 1855, CRITFC's member tribes reserved their sovereign rights to hunt and fish in areas ceded to the U.S. and at all usual and accustomed fishing stations. Cold, clean water that is essential for healthy fisheries resources are critical to the culture, religion, and economy of the CRITFC member tribes. Degraded water cannot nurture salmon or the humans who depend upon it for their physical and spiritual wellbeing. Secured by trust and treaty, it is imperative that this precious resource meets the enduring needs of present and future generations.

CRITFC is governed by the fish and wildlife committees of the tribes and is a technical support and coordinating agency for its member tribe's fisheries management. CRITFC employs biologists, hydrologists, other scientists, public information specialists, policy analysts, and administrators who work in a variety of areas in support of the tribal salmon restoration efforts. These areas of expertise include fisheries harvest control and coordination, scientific support, watershed restoration, water quality, public outreach, advocacy, and planning. CRITFC also operates a fisheries enforcement program for the four tribes. Inter-tribal police officers protect treaty fishermen from harm and harassment and enforce tribal fishing regulations.

Geographic Scope: The Columbia River Basin encompasses nearly 260,000 square miles. The river drains most of Washington and Idaho, half of Oregon, Montana west of the Continental Divide, small portions of Wyoming, Utah, and Nevada and 40,000 square miles of British Columbia. The 1,214-mile-long river begins at Columbia Lake, high in the Rocky Mountains of British Columbia, Canada. It initially flows northwest for 218 miles. After crossing the U.S.-Canada border into northeastern Washington, the Columbia River flows south, west, and south again across central Washington in a broad curve commonly referred to as the Big Bend. Just below the mouth of the Snake River, the Columbia runs west for its remaining 210 miles. It cuts through the heart of the Cascade Mountains, thus forming the Columbia River Gorge; flows into the Columbia River Estuary and finally empties into the Pacific Ocean at Astoria, Oregon. The Columbia River and its tributaries drain from high country watersheds through commercial forest lands, agriculture areas, dams and industrial cities.

CRITFC program activities occur throughout the 23 Columbia River subbasins that lie within the ceded lands and usual and accustomed fishing areas of Commission's member tribes. The

subbasins include:

Washington: Yakima, Wenatchee, Entiat, Okanogan, Methow, Klickitat, Tucannon, Wind, Little White Salmon, Big White Salmon.

Oregon: Deschutes, Fifteenmile, John Day, Umatilla, Imnaha, Hood, and Willamette.

Idaho: Clearwater, Salmon.

Multi-State: Mid-Columbia Mainstem (OR, WA), Snake River Mainstem (OR, WA, ID), Walla Walla River (OR, WA), Grande Ronde Basin (OR, WA).

Wy-Kan-Ush-Mi Wa-Kish-Wit (Spirit of the Salmon) is CRITFC's tribal salmon restoration plan and uses a basin-wide, ecosystem approach to halt the decline of Columbia River salmon and restore these once-abundant populations. Wy-Kan-Ush-Mi Wa-Kish-Wit addresses the problems affecting each stage of the salmon's life cycle, providing recommendations in the areas of habitat (including water quality), hydropower operation, harvest, and hatchery management. The plan combines the best current science with traditional knowledge and wisdom about the Columbia River Basin and its salmon populations to create a comprehensive, coordinated approach to salmon recovery. Wy-Kan-Ush-Mi Wa-Kish-Wit presents an approach for habitat restoration that addresses critical habitat needs.

II. PAST PERFORMANCE AND MANAGEMENT CAPABILITIES

CRITFC's EPA General Assistance Program (GAP) History: CRITFC's plan, Wy-Kan-Ush-Mi Wa-Kish-Wit (Spirit of the Salmon), remains the foundation for a basin-wide, ecosystem approach to restore the once-abundant anadromous fish populations. CRITFC has received General Assistance Program (GAP) funding since the late 1990s which has enabled CRITFC staff to help provide member tribes with a unified voice on key environmental issues, to promote tribal program development in support of tribal salmon restoration and to conduct the following activities: 1) provide ongoing coordination and technical support to tribal water quality programs of CRITFC's member tribes; 2) promote and facilitate initiatives to advance Wy-Kan-Ush-Mi Wa-Kish-Wit water quality goals; 3) advocate for stable funding sources and technical assistance for tribal water quality and watershed programs; and 4) assist the member tribes in the refinement of ongoing, basin-wide water quality programs within a watershed framework.

These activities have benefited the CRITFC member tribes in several ways, specifically by providing support on regional environmental issues that tribal environmental programs have limited resources and time with which to engage. In addition, the activities emphasize approaches that unite the member tribes on issues and common causes. Communication is critical to ensure that Commission activities support tribal environmental program goals and facilitates outreach to other regional tribes, and to federal, state, and private entities that share a concern for the health of the Columbia River Basin watershed. With GAP funding, CRITFC staff has been able to present regular updates to tribal staff and at monthly Commission meetings on issues such as water quality, toxic contaminants and climate change.

Some key accomplishments under the CRITFC's recent GAP grants are as follows:

Workshop on Water Quality Issues of Common Concern

In 2015, CRITFC organized a two day workshop for 40+ participants on "Water Quality Issues of Common Concern in the Columbia Basin". The purpose of the meeting was learn about updates from the EPA and Washington state on Columbia Basin water quality processes and related policy issues. Tribal staff/leaders from Cowlitz, Kalispel, Spokane, Umatilla, Nez Perze, Warm Springs, Yakama, Coeur D'Alene, and Colville attended and met with EPA staff including Region 10 Administrator, Dennis McLerran and Region 10 Director of the Office of Water and Watersheds, Dan Opalski. Also attending were Washington Governor's Office, Policy Advisory Rob Duff and Washington Department of Ecology's Kelly Susewind. CRITFC staff prepared a meeting notebook containing relevant documents on key issues. Tribes met in caucus on the first day to discuss water quality issues and to prepare for meetings with EPA and state officials. Key topics on the second day included: Water Quality Standards in WA, ID, and OR; Protection of Downstream Water Quality; Tribal Engagement on 303(d) Impaired Waters and TMDL programs; Hell's Canyon Site Specific Criteria; and an outlook for funding for the region through the Columbia River Restoration Act. The meeting concluded with a discussion about strategies for tribes in the Columbia Basin to move forward together on water quality issues.

Methylmercury Project

In 2015, CRITFC and the NSF Science and Technology Center for Coastal Margins Observation and Prediction (CMOP) developed a two-phase project designed to build mutual capacity to address the human health threats related to methylmercury in the Columbia River basin. By more completely understanding the processes leading to mercury methylation, tribes and others may identify and implement control strategies to reduce the presence of methylmercury in the environment. This work may lead to further collaborative scientific studies to address mercury contamination in aquatic ecosystems and reduce the impacts that mercury has on human health. Students from Oregon Health and Science University used computer aided models to develop a conceptual model of the environmental factors leading to methylmercury production in the Columbia River. The study used new data from fish tissue data collected in the watershed. The conceptual model links the environmental conditions needed to increase methylmercury production with probable mercury sources, and will be used by the tribes to inform larger, broader studies that could lead to effective remediation efforts.

Workshop in at the 2013 Tribal Environmental Leaders' Summit

A workshop was held for tribal leaders and staff during the 2013 Tribal Environmental Leaders' Summit in Spokane, WA. The meeting was sponsored through the National Tribal Toxics Council with funding provided by the EPA. The workshop consisted of a session on PCBs in Pigments that included technical presentations and a field trip to Inland Empire Paper Company that has developed innovative approaches to meeting water quality TMDLs for PCB in the Spokane River. Another workshop session focused on tribal green casinos and pollution prevention strategies that casino operations could use to reduce pollution in their operations. A third session addressed toxics issues and focused on EPA's current chemical assessment program for flame retardants. Tribal staff gave a presentation on the potential impact of flame retardants on subsistence populations. The workshop was open to all attending the 2013 Tribal Environmental Leaders' Summit and total session attendance was about seventy people including staff members from CRITFC tribes.

Lewiston Workshop

In March, 2014, a workshop on Aspirational Fish Consumption was held in Lewiston, ID. Invitations to the workshop were sent to Idaho tribes and consortia that are working on developing data on tribal fish consumption rates for setting human health criteria that would be protective of tribal lifestyles. The workshop was designed to foster further discussion on suppression and how tribal fishery restoration efforts can lead to increased fish consumption for tribal people in Idaho and others living in the Columbia Basin. Estimations of future fishery harvests based on restoration efforts were presented to evaluate if they could be used as a basis for the use of aspirational fish consumption rates for setting surface water quality standards on tribal lands. EPA and the fish survey design and implementation team attended to provide policy insights on the use of heritage and aspirational rates under Clean Water Act requirements and to facilitate the discussion. Members of the Confederated Tribes of the Umatilla Indian Reservation and Spokane Tribe joined the workshop to share their experiences in setting fish consumption rates that protect the highest level of current day consumption and heritage rate consumption in their own water quality standards. A tribal caucus was held on the first day to discuss and develop joint perspectives on the fish consumption study. Thirty-two people participated in the workshop, including leaders, technical staff, EPA staff, and survey contractors. The workshop provided an opportunity to learn about individual tribal efforts to set on reservation water quality standards and how tribes could use heritage rates to set protective standards. The also led to presentations on aspirational fish consumption rates during a subsequent Future of Our Salmon workshop in Spokane, WA. The notion of how restoration of fish passage could be used to support more protective water quality standards was presented to a broader audience.

Regional Relationships

CRITFC staff and tribes gained a great deal of experience in working to support the promulgation of water quality standards that would be protective of regional tribal lifeways where tribal members consume 6 to 12 times more fish than the average U.S. citizen. Experiences gained in the Oregon process were used in the States of Washington and Idaho to push for regulations that will limit the release of pollutants into the home watersheds of CRITFC's four member tribes.

In FY13, the States of Washington and Idaho both made progress in developing more protective water quality standards. CRITFC staff developed a resolution on the policy choice of acceptable cancer risk for tribal fish consumers with staff from the Northwest Indian Fisheries Commission and the Upper Columbia United Tribes. The resolution was presented at the spring 2013 Affiliated Tribes of Northwest Indians (ATNI) conference. The resolution was later submitted to the National Congress of American Indians. The following tribal resolutions were recently passed that supported CRITFC's efforts to make state and national policy choices that would be protective of tribal fish consumers:

- "Reduce Cancer Risk to Tribal Fish Consumers to at Least One in One Million", ATNI Resolution 13-44, adopted by the full assembly in May 2013.
- "Reduce Cancer Risk to Tribal Fish Consumers to at Least One in One Million", National Congress of American Indians Resolution REN-13-051 adopted by the Congress in June 2013.
- "Urging the Environmental Protection Agency to Prohibit the Use of PCBs in Any Amount in New Products", ATNI Resolution 14-17, adopted in February 2014.

- “Supporting EPA Promulgation of Surface Water Quality Standards for Washington State, and Opposing Governor Inslee’s Policy Decision to Weaken Cancer Protection Criteria”, ATNI Resolution #14-56, adopted in September 2014.
- “Urging Congress to Modify Proposed Federal Toxics Substances Control Act Legislation to Incorporate “Treatment-As-A-State” Status for Tribes, NCAI Resolution #MSP-15-013, adopted in June 2015.
- “Opposing Idaho’s Proposed Water Quality Standards and Fish Consumption Rate”, ATNI Resolution #15-51, adopted in September 2015 and NCAI Resolution #SD-15-034 adopted in October, 2015.

CRITFC staff has worked as a member of the Northwest Indian Fisheries Commission fish consumption working group to provide tribal input into the Washington state rulemaking process on sediment management standards and on the surface water quality standards. In addition, CRITFC staff has worked with the Washington’s Department of Ecology as a member of their Toxics Reduction Strategy working group. CRITFC staff also attended all Idaho public meetings in person or through conference calls on the negotiated rulemaking for water quality standards as the state moves forward in addressing the disapproval of their proposed fish consumption rate of 17.5 grams per day.

Collaboration with the EPA on Pollution Prevention and Source Control

CRITFC’s Water Quality Coordinator was selected to join the National Tribal Toxics Council whose mission is to advance tribal toxics management policies and programs consistent with the needs, interests, and unique legal status of American Indian Tribes, Alaska Natives, and Native Hawaiians. CRITFC staff serves as the chairman of the Council and has been an active member of the Council since its inception.

Columbia River Toxic Reduction Activities

CRITFC worked together with tribal staff and other partners on reducing Columbia River toxics and participated in the Columbia River Toxic Reduction Workgroup meetings. At the Columbia River Toxics Reduction Working Group Executive meeting in August, 2011, CRITFC’s Executive Director signed a statement of commitment to collaborative efforts to reduce toxics in the Columbia River Basin through formalization of the Columbia River Toxics Reduction Working Group. CRITFC staff organized and hosted a Toxic Reduction Workshop at CRITFC in spring 2012 to identify a select group of proposed actions focused on tribal issues for the Columbia River Toxics Reduction Group’s Executive session.

Fish Contaminant Database

CRITFC staff continue to maintain a geodatabase of the Fish Contaminant Survey results from a mid-1990s study of the Columbia Basin and tribal fishing sites. CRITFC is now able to share complete data and results from the new analysis with its member tribes which will allow them to spatial connect contaminated fish tissue results with the location of samples in the study and with other spatial data related to water quality. Data from the 2009 lamprey fish tissue study was provided to the Oregon Health Authority for use in evaluating health impacts of lamprey consumption on tribal people.

Fish Contaminant/Consumption Surveys

Completion of the U.S. Environmental Protection Agency Columbia River Fish Contaminant

Survey in 2002 provided a first look at the extent of fish tissue contamination in Columbia River fish. This study, along with CRITFC's earlier fish consumption study, were used in a cooperative effort between the Umatilla Tribe, EPA and Oregon to initiate an administrative process to increase the state's fish consumption rate as part of the methodology to determine water quality standards. The result is an explicit recognition of the tribal characteristics unique to Oregon's population in setting appropriate standards for the benefit of tribal communities as well as other segments of Oregon's population who are highly dependent on fish consumption in their diet. CRITFC staff made a presentation on lamprey fish tissue contamination levels at the Willamette Lamprey Workshop in November, 2011 and on water quality at the First Foods Tribal Summit in Seattle, WA in May, 2011.

Climate Change Activities

CRITFC worked together with other partners on climate change projects/issues within the Columbia River Basin which lead to other funding opportunities such as the Pacific Coastal Salmon Recovery Fund (PCSRF). CRITFC has contributed to the National Fish, Wildlife & Plants Climate Adaptation Strategy (NFWPCAS) which is expected to be finalized in June of 2012. Adaptation efforts recommended by the strategy's implementation plan will be strengthened through the incorporation of a water quality perspective on proposed actions. CRITFC staff will coordinate with tribal staff and fishery and water agencies on the development of mitigation/adaptation measures that include water quality considerations such as toxic contaminants, water temperatures, turbidity and non-point source pollution.

Other Water Quality Issues

Additional support to tribal water quality programs included the preparation of technical comments on regulatory processes such as the Clean Water Act programs administered by the states that may impact the treaty trust resources of the CRITFC member tribes. Staff also participated in activities related to hazardous waste cleanup at the Portland Harbor Superfund site and Bradford Island as well as other forums such as the Lower Columbia River Toxics Reduction Strategy group and the Lower Columbia River Estuary Partnership that addressed toxic contaminants in the Columbia River Basin.

III. ENVIRONMENTAL ISSUES

CRITFC's water quality program goals focus on providing coordination and technical support for tribal projects that will improve water quality and promote clean, health watersheds to support the tribal fishery. Toxic contaminants in the Columbia River watershed can negatively impact the health and vitality of the tribal fishery.

The results of an U.S. Environmental Protection Agency (EPA) fish contaminant survey, completed in cooperation with CRITFC, showed that 92 priority pollutants were detected in resident and anadromous fish tissue collected from 24 different tribal fishing sites on the Columbia River (2002). Contaminants measured in these fish included PCBs, dioxins, furans, arsenic, mercury, and DDE, a toxic breakdown product of the pesticide dichlorodiphenyltrichloroethane (DDT).

In January 2009, the EPA released the *Columbia River Basin: State of the River Report for Toxics*, a look at toxic contaminants in the basin. The report focused on persistent toxic

chemicals, which remain in the environment for a long time, contaminate food sources, and accumulate in fish and birds. The report identified four contaminants of primary concern because they are, “found through the Basin at levels that could adversely impact people, fish, and wildlife.” These four are mercury, DDT and breakdown products, polychlorinated biphenyls (PCBs), and poly brominated biphenyls (PBDE) flame retardants.

Additional concerns have been raised in recent studies of emerging chemicals of concern in Columbia River fish tissue, sediments, and waste-water-treatment-plant effluent. Flame retardants that have been linked to impaired endocrine and thyroid functions and found in numerous consumer applications are doubling in whitefish in the upper Columbia River every 1.6 years from 1995 to 2000 (Rayne et al., 2003). Endocrine-disrupting compounds that are thought to be the cause of intersex characteristics and elevated female egg yolk protein levels in male juvenile chinook salmon were at 22 of the 23 sites sampled by Nilsen et. al. (2007). Morace (2012) consistently found human-health pharmaceuticals, personal care products, steroids, and PBDEs in waste-water-treatment-plant effluents in cities along the Columbia and measured estrogenicity levels in these samples that were well above levels that have been shown to cause effect in aquatic biota.

Currently used pesticides, herbicides and insecticides contain chemicals that have sublethal effects on salmon including problems with olfaction, homing, and predator avoidance (Sandahl et. al. 2007). Mixtures of pesticides can have an additive or synergistic effect. Laetz et. al. (2009) determined that mixtures of diazinon, chlorpyrifos, malathion, carbaryl, and carbofuran—the most extensively used pesticides in California and the Pacific Northwest—significantly inhibit the ability of salmon to react to essential stimuli and therefore the presence of these mixtures may be affecting salmon recovery more than expected. In the Yakima Basin, organochlorine pesticides, nutrients, dissolved oxygen and bacteria problems are associated with suspended sediment loading and transport from agricultural activities into the river (Morace et al. 1999).

Stormwater runoff acts as an integrator of human activities and can be a source of various compounds to aquatic ecosystems. While the inputs from stormwater runoff are sporadic, their potentially large contributions during short periods can still have an effect on biota that inhabit mixing zones in the receiving waters. Studies have directly correlated prespawn mortality to chemical pollutants in nonpoint source urban runoff (Spromberg and Scholz, 2011).

The body of knowledge about Columbia River system contaminants that could negatively affect fish has grown since 1995. Among the reports are Rayne et al., 2003; Nilsen et al. 2007; Sandahl et al. 2007; Laetz et al. 2009; Morace et al. 2009; Spromberg and Scholz 2011; Morace 2012; Nilsen and Whitney 2013, in preparation, and the National Marine Fisheries Service, Biological Opinions 2009, 2010, 2011, 2012.

Oregon and Washington (2013) recently documented that mercury concentrations in fish in the Columbia River Basin exceed those considered safe for ecosystem and human health. What is still not known is which factors are most important in controlling the production of the bio-accumulative and toxic organic form, methylmercury. Scientists do know that the formation of methylmercury can be linked to parameters associated with water management activities in reservoirs, such as water inundation and wetting and drying cycles, organic carbon and nutrient cycling and inputs from upland terrestrial habitats. Needed is a better understanding of the linkage between reservoir management and the risk of mercury methylation. Operational

approaches to minimize the risks associated with mercury contamination can and should be developed while still meeting the critical water needs.

Elevated water temperature can increase the uptake of mercury in fish tissue (Dijkstra, et. al, 2013) and has been associated with major disease outbreaks of furunculosis, parasites and bacterial pathogens. There is also compelling evidence that increasing temperatures could be deleterious to pollutant-exposed wildlife because elevated water temperatures may alter the biotransformation of contaminants to more bioactive metabolites and impair homeostasis. (Noyes, et. al, 2009, Schiedek, et. al, 2007).

Water quality is also a priority concern because tribal people are consuming fish that may be tainted with toxic contaminants. CRITFC tribal members that were surveyed in the fall and winter of 1991-1992 ate six to eleven times more fish than EPA's estimated national average, at that time of 6.5 grams per day (CRITFC 1994). If tribal members had access to resume ancestral cultural diets, the quantity of fish in the diet would be even greater. In 2011, Oregon adopted water quality standards based on the tribal fish consumption rate of 175 grams per day that was documented in the CRITFC survey. Washington and Idaho are in the process of updating their water quality standards to provide a similar level of protection for high fish consuming tribal members.

In 2005 CRITFC's tribes joined EPA Region 10 and numerous other federal, state, and local agencies and others to form the Columbia River Toxics Reduction Working Group. To date, implementation of its goal to reduce human and ecosystem exposure to toxics has been greatly restricted by a lack of realistic and sustainable funds. In 2011, based largely on CRITFC's Fish Consumption Survey, EPA approved Oregon's water quality standards. Oregon became the first state in the nation to adopt water quality standards based on human health criteria that recognize tribal customs and culture. While adoption of standards represents progress in controlling toxics, the standards must be enforced for water quality to improve. The enforcement of Oregon's strict water quality rules will make it safe to eat 175 grams per day or about 23 servings of 8 oz. of fish per month.

Currently no sustained funds are directed to the Columbia River Basin for toxic reduction activities and monitoring programs—as called for the 1995 Wy-Kan-Ush-Mi Wa-Kish-Wit plan—or for research. Major federal investments in such programs are now critical and can help offset impacts from the Federal Columbia River Power System. In 2008, the Columbia River Basin was designated a Large Aquatic Ecosystem by the EPA but receives the least amount of funding for water quality research and monitoring of all the great river and water bodies in the United States. The lower Columbia River estuary receives \$600,000 a year in federal funding whereas Puget Sound, Chesapeake Bay, and the Great Lakes each receive well over \$50 million.

Pollution prevention and green chemistry strategies that hold the most promise for toxic reduction in the Columbia River are limited by the lack of progress on reform of the Toxic Substances Control Act (TSCA). Current TSCA rules impose burdens on government to prove actual harm to control or replace a chemical, which stifles the development of safer chemical and product designs.

The impacts of climate change on tribal fisheries and water resources, as well as other natural and cultural resources, are also a growing concern. Evidence for anthropogenic climate change is

strong and a well-documented scientific consensus finds that the earth has warmed in the 20th century from human activities and will likely continue to do so at an increasing rate during the 21st century (Oreskes 2004, IPCC 2007).

Climate change is expected to significantly alter the ecology and economy of the Pacific Northwest during the 21st century. Higher temperatures are expected to decrease snowfall and increase rainfall during the winter months, leading to shifts in the timing and quantity of runoff. This is likely to produce increased flooding during the winter and decreased flows during the summer when water supply demands are high. Water quality will also likely be impacted by increased erosion and sediment delivery from winter storms and higher summer water temperatures. Water quality may be impacted by stronger interactions between toxic chemicals and target molecules which could make fish more sensitive to environmental stressors. Salmon are particularly susceptible to changes in water quantity and quality because they rely on freshwater rivers and streams for migration, and for spawning and rearing habitat. These impacts will significantly affect the CRITFC member tribes and their cultural use of resources.

IV. PROJECT GOALS

The following objectives have been identified in the tribal plan to meet the Commissions' water quality program goals:

- 1) Provide technical and funding support for member tribes' water quality projects and activities consistent with Wy-Kan-Ush-Mi Wa-Kish-Wit and within a watershed framework.
- 2) Provide technical assistance to tribal staff on toxic contaminants and conventional pollutants.
- 3) Promote the tribal approach to water quality management and restoration within a watershed framework.
- 4) Provide ongoing coordination and technical support for tribal water quality improvement initiatives and programs.
- 5) Provide education and outreach to the tribal and non-tribal community to advance Wy-Kan-Ush-Mi Wa-Kish-Wit water quality goals of: 1) eliminating sources of toxic pollution that accumulate in fish; and 2) reducing discharges of other contaminants to meet water quality criteria for anadromous fish.

Wy-Kan-Ush-Mi Wa-Kish-Wit was updated in 2013 and the approach to achieving water quality goals was strengthened. The following new and modified actions were added to the plan:

- a. Tribes throughout the Columbia River Basin, in coordination with CRITFC, are interested in establishing a regional approach to water quality standards, best management practices, and advocating for the implementation of reasonable and prudent alternative measures that the National Marine Fisheries Service Biological Opinions have recommends.
- b. CRITFC will work to support TSCA reform and promote green chemistry and pollution prevention strategies that limit the additional release of toxic chemicals into the environment.
- c. Advocate for a renewed Columbia River Restoration Act that would provide the financial support needed for a large-scale ecosystem protection program to conduct

- the monitoring and remediation programs necessary to protect the watershed on a basinwide scale.
- d. Dam system managers should conduct a programmatic review and assessment of how hydropower projects impact the uptake of mercury and other toxic substances in the mainstem Snake and Columbia rivers and identify opportunities for operational changes or other actions to help mitigate these impacts and reduce toxic contamination.
- e. Implement restoration actions through subbasin plans and third-party eco-certification programs that promote best management practices to agricultural runoff, municipal and industrial stormwater, and other non-point-sources of pollution.

In FY17-18, CRITFC plans to use GAP funds to support CRITFC's Water Quality Coordinator position whose work will include working to meet goals from the 2013 update of Wy-Kan-Ush-Mi Wa-Kish-Wit (a-e) and will also include:

- f. Work to establish a regional approach to state environmental standards and best management practices that include tribal fish consumption rates for WA and ID's water quality standards, numeric criteria for WA's sediment management standard and review of all state's 303(d) listing procedures (for temperature and toxics).
- g. Advocate for use of EPA's 2015 Human Health criteria updates in state water quality standards that include bioaccumulation factors for toxics in all states in the watershed.
- h. Work with EPA to assure that tribal perspectives and projects are considered in actions that result from NOAA's 2015 biological opinion on options to protect and enhance cold water refugia in the Columbia River in response to EPA's consideration of Oregon's temperature standards.

V. COMPONENTS

This proposal contains three primary objectives which are identified as program components and are attached.

CRITFC proposes to provide technical and policy support to CRITFC's tribes to assist them in developing tribal capacity and in understanding and solving complex, scientific issues for the protection of treaty secured subsistence resources from environmental harm. CRITFC and its member tribes present a unified approach to water quality restoration to coordinate tribal actions and provide outreach to non-tribal governments and other entities working on water quality restoration in the Columbia River Basin.

Accountability will be maintained through CRITFC's Department of Finance accounting procedures. The hours allocated to each work plan task reflect the distribution of 100% of the Water Quality Coordinator's salary. Budget details are presented in the Proposed Budget and associated Work Plan. A small portion of the GAP funding will also be used for travel and other miscellaneous costs associated with work plan tasks.

VI. JOINT PERFORMANCE EVALUATION PROCESS

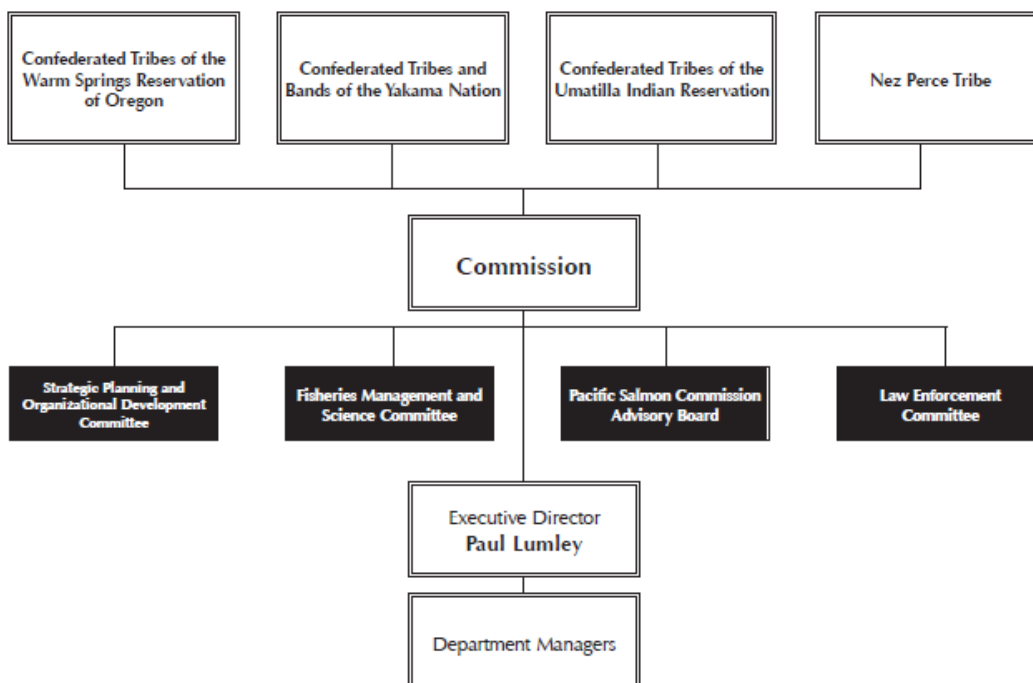
Within 30 days of the end of each fiscal quarter, the Water Quality Coordinator will submit a performance report detailing the accomplishments toward the completion of work plan commitments, discussing the work performed for all workplan components, and identifying any

existing problem areas that could affect or delay project completion. This evaluation process will help to ensure that the grant is being administered properly and that work conducted under the grant is in accordance with approved work plan.

VII. ORGANIZATIONAL CHARTS



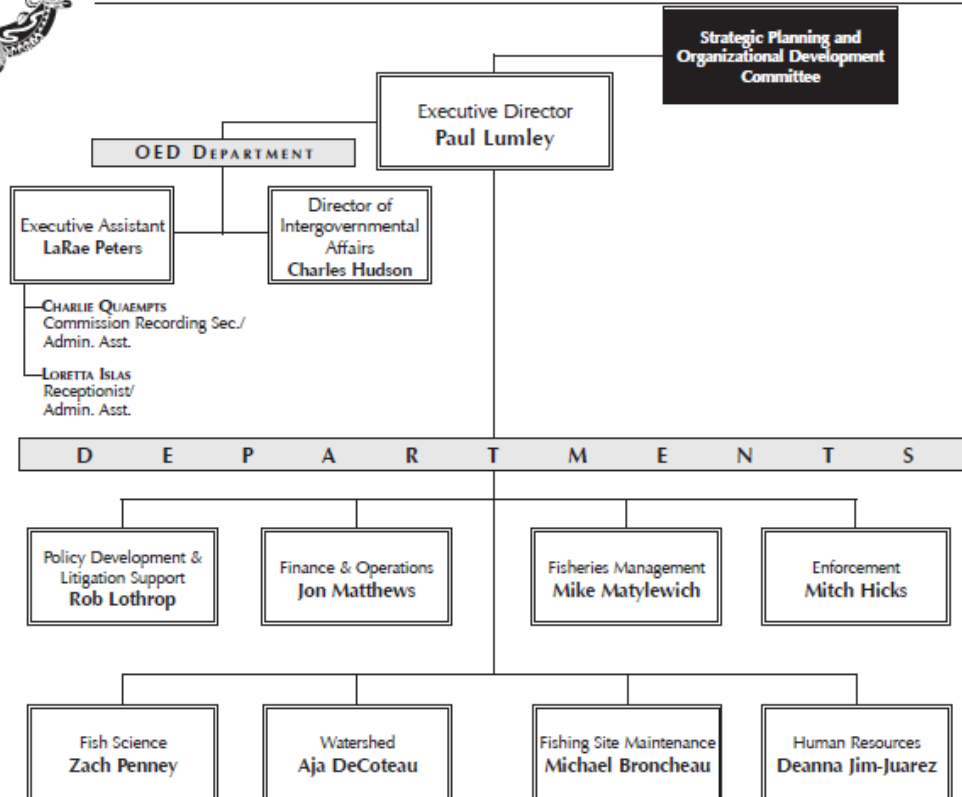
Commission



CRITFC Organization Chart - 2016.01.05 update



Office of the Executive Director



CRITFC Organization Chart - 2016.01.05 update

VIII. EPA ROLES AND RESPONSIBILITIES

If the assistance agreement is funded as a grant, the EPA will have no substantial involvement in the accomplishment of work plan commitments. EPA will monitor progress and provide technical assistance as needed to ensure project completion.

IX. STATUTORY AUTHORITY

The Commission has developed this proposal under the statutory authority provided by the Indian Environmental General Assistance Program Act of 1992.

X. REFERENCES

CRITFC 1994. A Fish Consumption Survey of the Umatilla, Nez Perce, Yakama, and Warm Springs Tribes of the Columbia River Basin. Technical Report 94-3.

CRITFC, 2013. Wy-Kan-Ush-Mi Wa-Kish-Wit Spirit of the Salmon Restoration Plan, www.critfc.org.

Dijkstra JA, Buckman KL, Ward D, Evans DW, Dionne M, et al. (2013) Experimental and Natural Warming Elevates Mercury Concentrations in Estuarine Fish. PLoS ONE 8(3): e58401. doi:10.1371/journal.pone.0058401.

EPA 2002. Columbia River Basin Fish Contaminant Survey 1996-1998. PA 910/R-02-006.

EPA & The Columbia River Toxics Reduction Working Group, 2010, Columbia River Basin Toxics Reduction Action Plan, September 2010. Accessed September 14, 2012, at http://www.epa.gov/columbiariver/pdf/columbia_river_toxics_action_plan_sept2010.pdf.

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Fourth Assessment Report. On-line at: <http://www.ipcc-wg2.org/>

Laetz, C.A., Baldwin, D.H., Collier, T.K., Hebert, V., Stark, J.D., and Scholz, N.L., 2009. The synergistic toxicity of pesticide mixtures—Implications for risk assessment and the conservation of endangered Pacific salmon: *Environmental Health Perspectives*, v. 117, no. 3, p. 348–353.

Morace, J.L., 2012, Reconnaissance of contaminants in selected wastewater-treatment-plant effluent and stormwater runoff entering the Columbia River, Columbia River Basin, Washington and Oregon, 2008–10: U.S. Geological Survey Scientific Investigations Report 2012–5068, 68 p.

Morace, J.L., Johnson, L., and Nilsen, E., 2009. Toxic contaminants and their effects on resident fish and salmonids. Presentation to Northwest Power and Conservation Council Columbia River Estuary Science-Policy Exchange, September 10, 2009, <http://www.nwcouncil.org/fw/program/2009spe/presentations/Contaminants.pdf>, accessed September 14, 2012.

Nilsen, E.B., Rosenbauer, R.R., Furlong, E.T., Burkhardt, M.R., Werner, S.L., Greaser, L., and Noriega, M., 2007. Pharmaceuticals, personal care products and anthropogenic waste indicators detected in streambed sediments of the Lower Columbia River and selected tributaries, *in* 6th International Conference on Pharmaceuticals and Endocrine Disrupting Chemicals in Water: Costa Mesa, Calif., National Ground Water Association, Paper 4483, 15 p.

Nilsen, Elena and Whitney Temple. In preparation 2013. Emerging and Legacy Contaminants in Larval Pacific Lamprey in the Columbia River Basin.

Noyes PD, McElwee MK, Miller HD, Clark BW, Van Tiem LA, Walcott KC, Erwin KN, Levin ED. The toxicology of climate change: environmental contaminants in a warming world. *Environ Int.* 2009 Aug;35(6):971-86.

Oreskes, N. 2004. Behind the Ivory Tower: The Scientific Consensus on Climate Change. 2004. *Science* Vol 306, no 5702: 1686

Rayne, S., M.G. Ikonomou, B. Antcliffe. 2003. Rapidly increasing polybrominated diphenyl ether concentrations in the Columbia River system from 1992 to 2000. *Environ. Sci. Technol.* 37:2847-2854.

Schiedek D, Sundelin B, Readman JW, Macdonald RW. Interactions between climate change and contaminants. Mar Pollut Bull. 2007 Dec;54(12):1845-56.